

Innovative Approaches to Inventory and Implementation

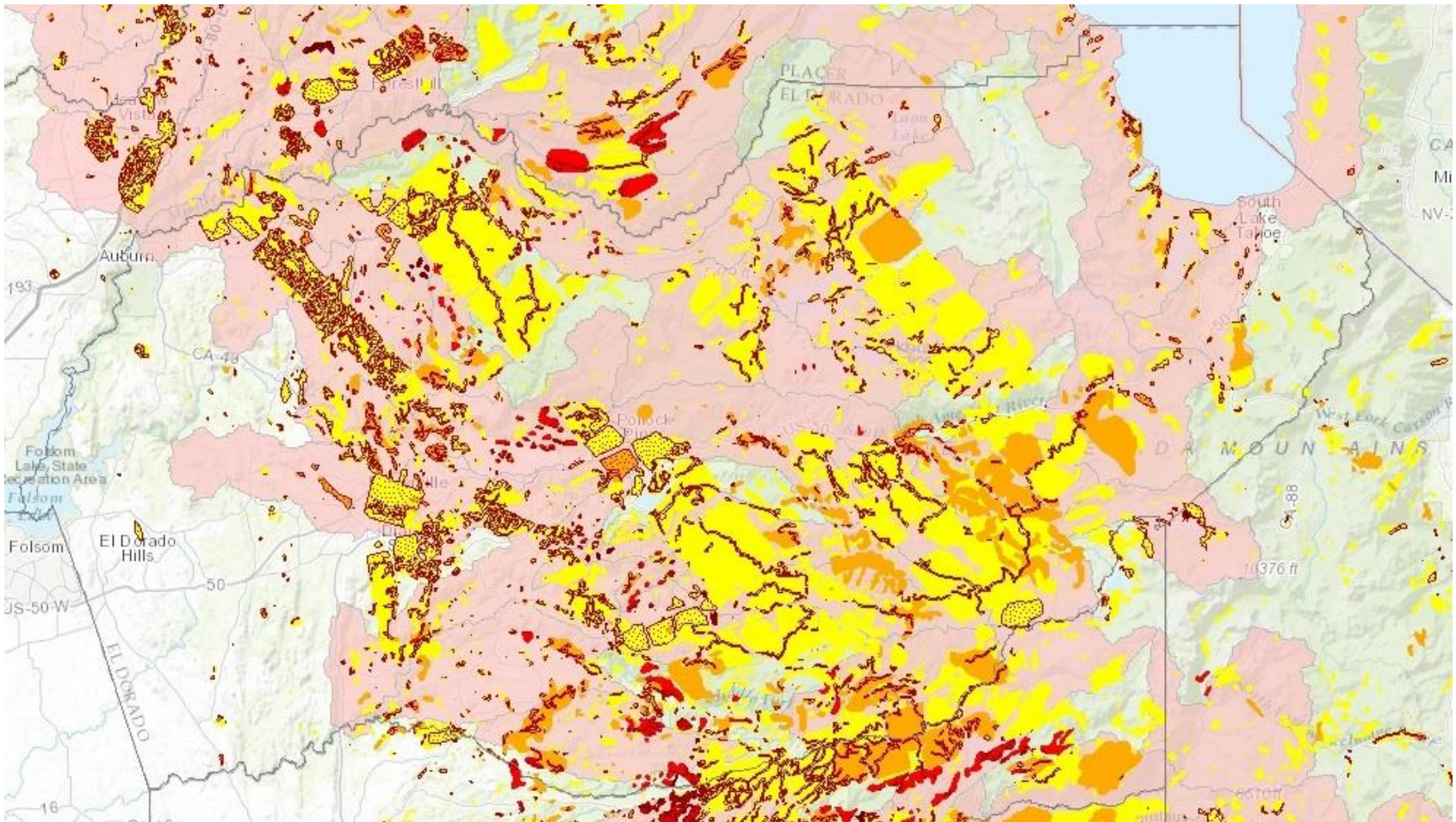
Data Collection: Field, Cloud, and Desktop

Presented by José Crummett
GIS Manager , County of El Dorado
Featuring GIS products developed by the
County GIS staff: Frank Bruijn, Alex Gole,
Julie Lopez, Mark LaLoggia, Jim Urquhart,
Jeff Whitford, and Linda Wright

Where is the problem?



Where is our problem?



Where is our problem?

From the CLOUD we need the State's data:

High Hazard Zones - Tier 1

High Hazard Zones – Tier 2

Aerial Detection Surveys 2012 to 2015

On the DESKTOP:

Clip all State layers to County Outline.

Re-project all layers to County projection.

Add local layers: roads, parcels, jurisdictions, facilities.

What, who, how much?

- Tree counts, hazard zones by Fire District, Sup District, by private lands, public lands, by County Road, by elevation band, by road segment, near county facility, sum by count, acres, and value.
- We had to clip, spatial join, intersect, nearest function, buffer, union, dissolve, summarize, and even pivot!

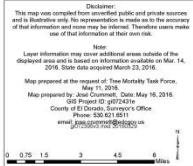
Tree Mortality High Hazard Areas and Fire Protection Service Providers



What's the impact ?

DISTRICT	EL DORADO COUNTY FPD			
Area with	Structure Value	Land Value	Parcel Acres	Parcels
No Tree Mortality	\$4,273,044,273	\$2,108,524,027	127,014	26,157
>0 to 5 trees per acre	\$214,372,325	\$130,921,703	36,428	1,685
5+ to 15 trees per acre	\$18,767,593	\$12,413,852	9,559	156
15+ to 40 trees per acre	2,954,170	\$2,032,565	559	21
40+ trees per acre	\$0	\$0	0	0
Totals	\$4,509,138,361	\$2,253,892,147	173,560	28,019
Impact of Tree Mortality	\$236,094,088	\$145,368,120	46,546	1,862

County of El Dorado
State of California



What's it really like out there?



Where are the trees?

Know where the state says there are dead trees.

Where do we go first?

Points awarded for County maintained, school bus routes, transit bus route, traffic volumes, and planned Capital improvement projects.

What do we take to the FIELD ??

Collector in the CLOUD

- Build data store framework on the DESKTOP.
- All fields either domain drop downs or auto-filled.
- Add other layers.
- Publish database and map frame work to the CLOUD (AGOL).
- Enhance for FIELD presentation – symbols, aliases, attribute format and display.
- Build security framework; groups, roles, users.
- Users download Collector from Google or Apple app stores.

Collector in the CLOUD

The screenshot displays the Esri Collector web application interface. The top navigation bar includes tabs for Details, Add, Basemap, and Analysis, along with icons for Save, Share, Print, Directions, Measure, and Bookmarks. A search bar on the right prompts the user to "Find address or place".

On the left, a "Contents" panel lists map layers: Trees, County Roads, Non County Roads, County Owned Property, County Roads 100' Buffer, and Parcels. The "Trees" layer is currently selected.

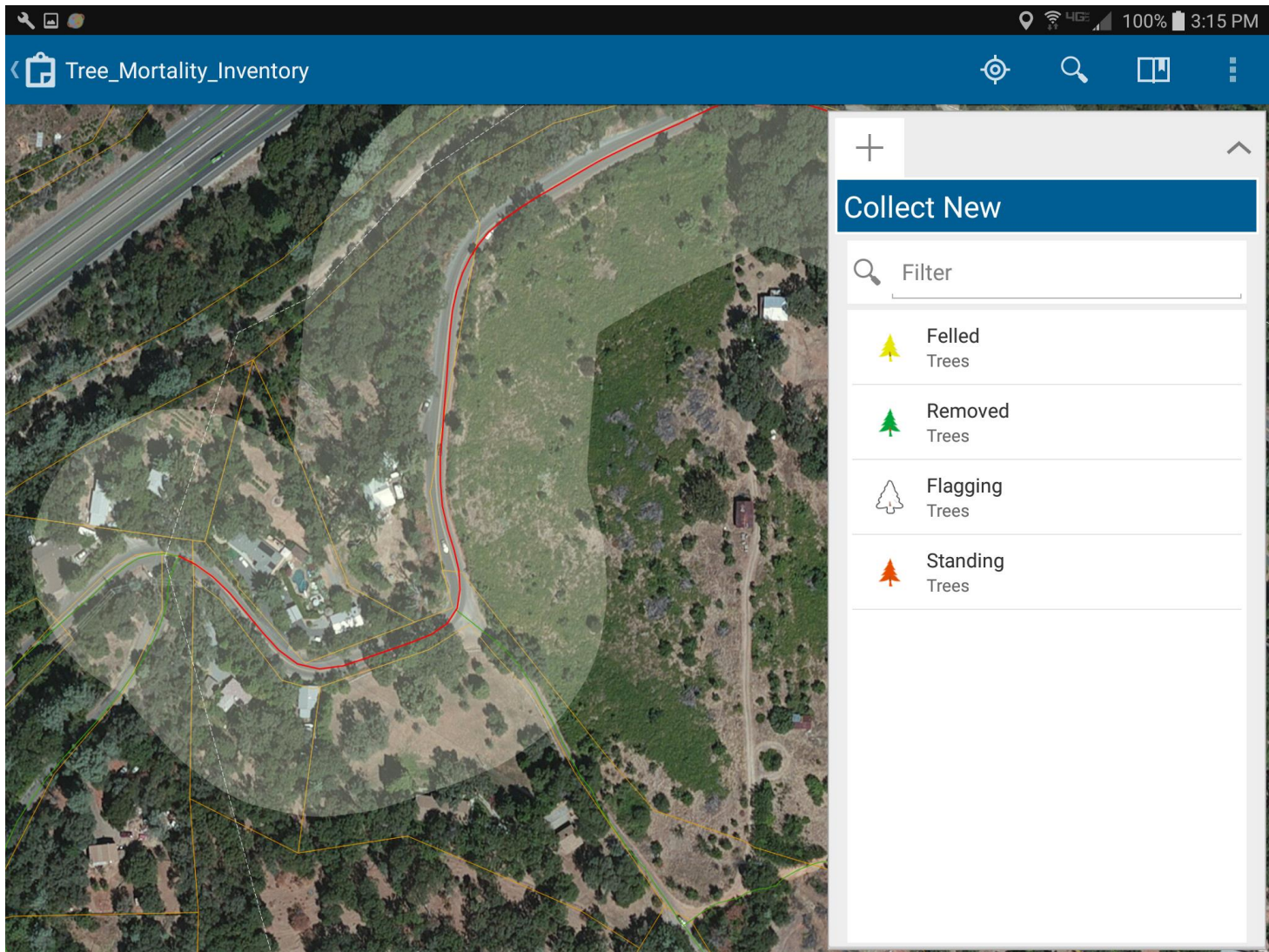
The main map area shows a satellite view of Northern California, with labels for various locations including Lincoln, Auburn, Roseville, Folsom, El Dorado Hills, Placerville, Diamond Springs, Pollock Pines, Placer, El Dorado, South Lake Tahoe, and Gardnerville. The map is overlaid with a white boundary line.

Below the map, a table titled "Trees (585 features, 0 selected)" displays data for a specific tree feature. The table has columns for Tree Species, Tree Count, Tree Status, Priority, Notes, Created By, Creation Date, Edited By, Edited Date, and an Options column. The data row shows a Ponderosa Pine with a count of 25, standing status, high priority, and a note about its proximity to a roadway. The creation and editing dates are both 5/19/2016.

TREE SPECIES	TREE COUNT	TREE STATUS	PRIORITY	NOTES	CREATED BY	CREATION DATE	EDITED BY	EDITED DATE	Options
Ponderosa Pine	25	Standing	High	Could fall in to roadway	[Redacted]_ELDORA DOCOUNTY	5/19/2016, 9:37:41 AM	[Redacted]_ELDORA DOCOUNTY	5/19/2016, 12:23:57 PM	(1) Show

At the bottom left, the footer text reads: "Esri.com | ArcGIS Marketplace | Help | Terms of Use".

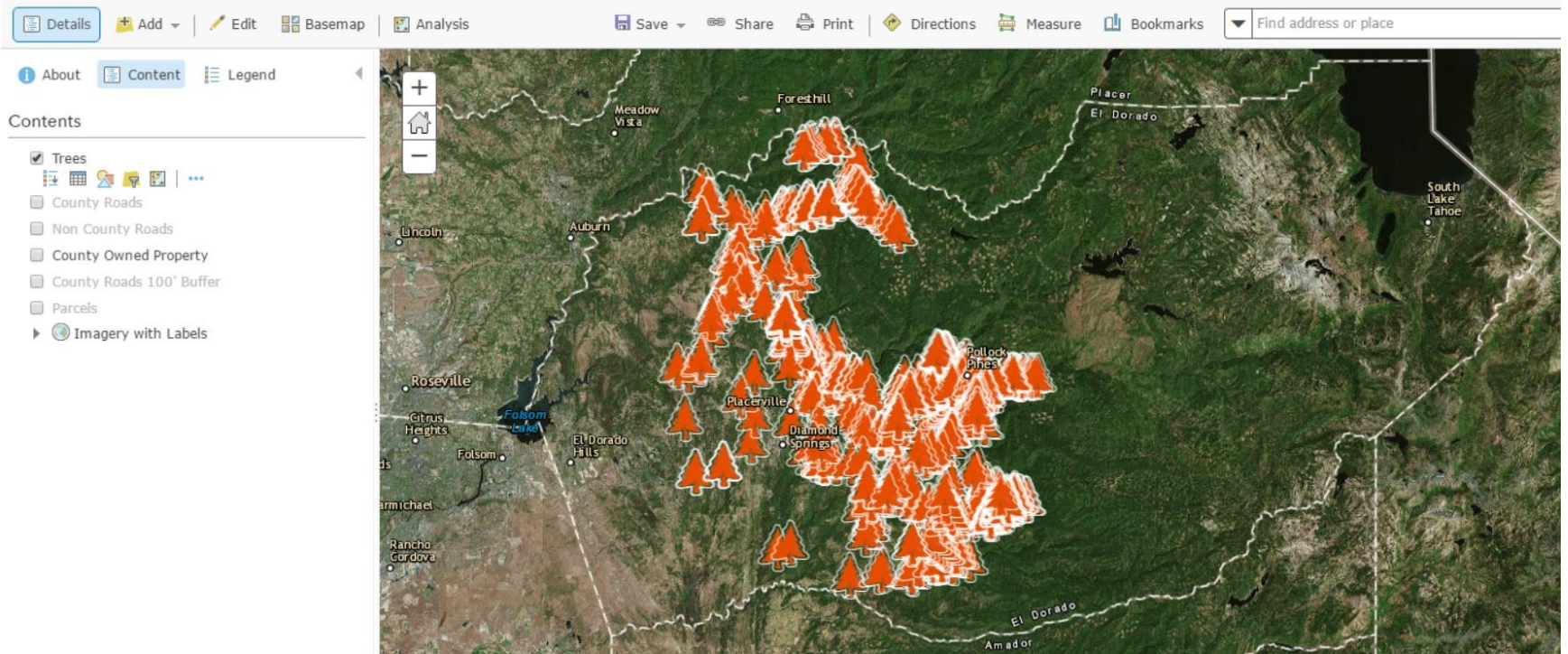
Collector in the Field



FIELD Collection

Home ▾ Tree_Mortality_Inventory

New Map ▾



Who is impacted?

- Download point file from CLOUD.
- Spatial Join on nearest to get parcel data and owner.
- Use to notify property owners/community of next steps.
- Can summarize by road segment.
- Can add counts to priority rank.
- Can count by jurisdiction.

Where is that tree?

- Tree Tagging.

New data requirements.

New protocols.

New users.


New FIELD devices.

Where is that tree?

Details Add Basemap Analysis Save Share Print Directions Measure Bookmarks Find address or place

Contents

- Tree Tagging4
- Trees
- County Roads
- Non County Roads
- County Owned Property
- County Roads 100' Buffer
- Parcels
- Imagery with Labels

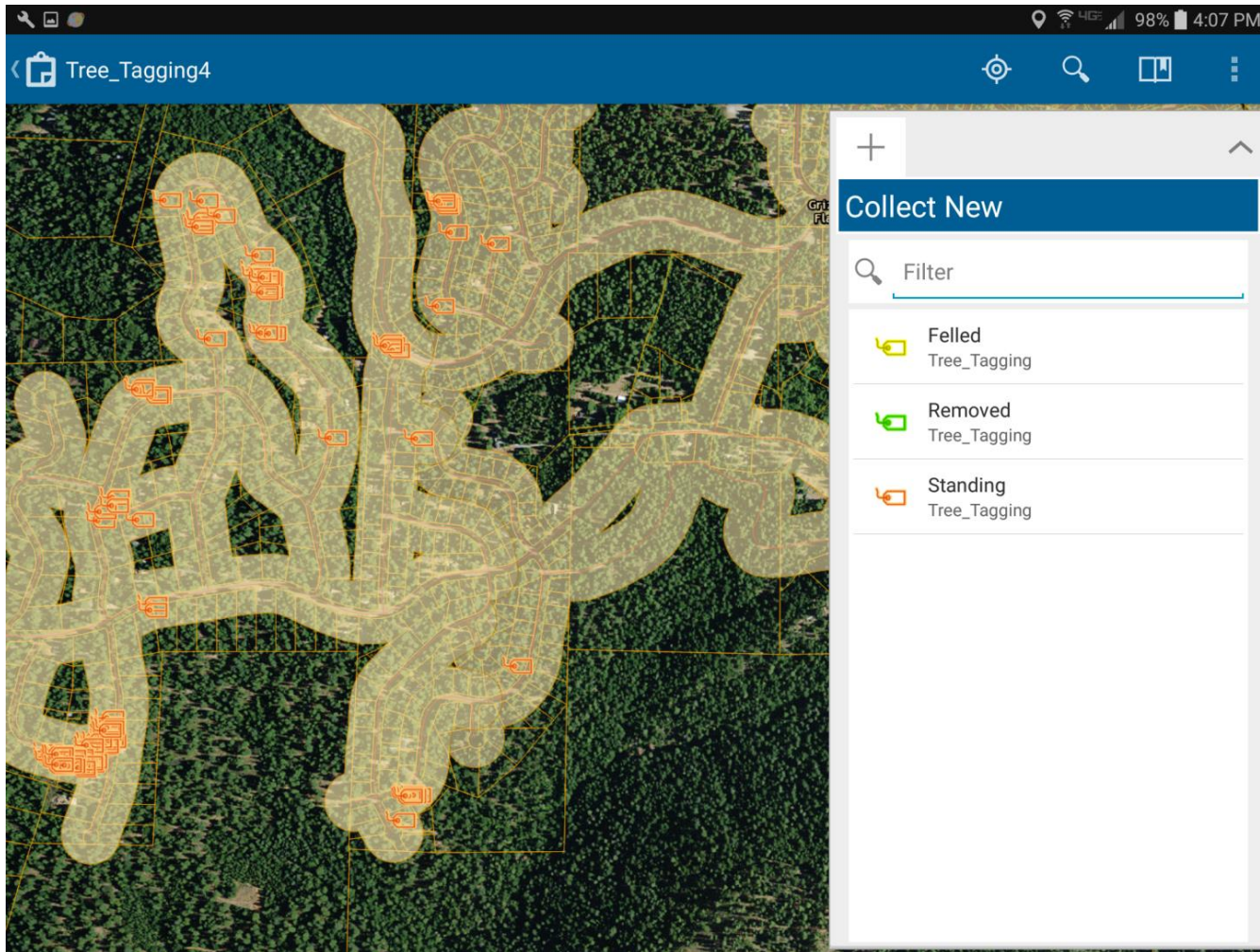


Tree Tagging4 (269 features, 1 selected)

TREE SPECIES	TREE STATUS	INFRASTRUCTURE	TREE DIAMETER	NOTES	TREE HEIGHT	FELLED DATE	FELLED BY	DISPOSAL DATE	DISPOSAL METHOD	UNIQUEID	HIGH RISK	Photos and
Cedar	Standing	Road	17	49						4,602	NO	(2) Show

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Tree Tagging in the FIELD



Eureka!

